



SPEC® CFP2006 Result

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Fujitsu Limited

SPECfp®2006 = 13.6

Fujitsu SPARC Enterprise M3000

SPECfp_base2006 = 13.0

CPU2006 license: 19

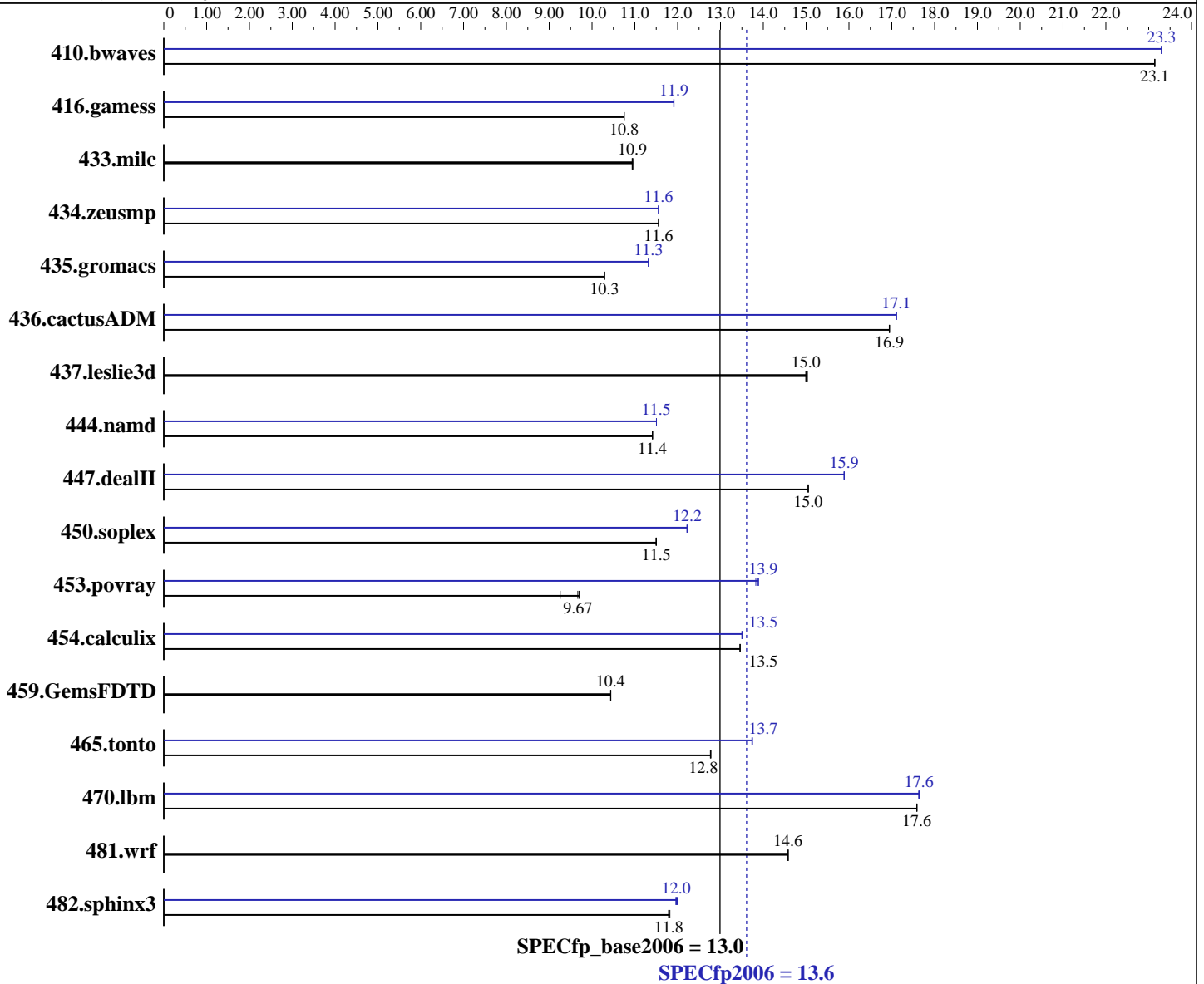
Test sponsor: Fujitsu Limited

Tested by: Fujitsu Limited

Test date: Sep-2008

Hardware Availability: Oct-2008

Software Availability: Oct-2008



Hardware

CPU Name: SPARC64 VII
 CPU Characteristics:
 CPU MHz: 2520
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core
 CPU(s) orderable: 1 chip
 Primary Cache: 64 KB I + 64 KB D on chip per core
 Secondary Cache: 5 MB I+D on chip per chip

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Software

Operating System: Solaris 10 10/08
 Compiler: Sun Studio 12 with patches
 124861-08, 124863-06, 124867-07, 127143-03,
 127000-05, 127001-01
 (see patch information below)
 Auto Parallel: No
 File System: ufs
 System State: Default
 Base Pointers: 32-bit

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L3 Cache: None
Other Cache: None
Memory: 16 GB (2 GB x 8), 2-way interleaved
Disk Subsystem: 73 GB 10,000 RPM Fujitsu MAY2073RC SAS
Other Hardware: None

Peak Pointers: 32-bit
Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	587	23.1	587	23.1	587	23.1	583	23.3	583	23.3	583	23.3
416.gamess	1821	10.8	1821	10.7	1821	10.8	1644	11.9	1643	11.9	1644	11.9
433.milc	839	10.9	838	11.0	839	10.9	839	10.9	838	11.0	839	10.9
434.zeusmp	788	11.6	788	11.6	788	11.6	788	11.6	788	11.6	788	11.6
435.gromacs	694	10.3	694	10.3	694	10.3	631	11.3	631	11.3	631	11.3
436.cactusADM	705	16.9	705	16.9	705	16.9	699	17.1	699	17.1	699	17.1
437.leslie3d	627	15.0	627	15.0	625	15.0	627	15.0	627	15.0	625	15.0
444.namd	703	11.4	703	11.4	703	11.4	697	11.5	697	11.5	697	11.5
447.dealII	760	15.0	760	15.1	760	15.0	720	15.9	720	15.9	720	15.9
450.soplex	725	11.5	725	11.5	726	11.5	683	12.2	682	12.2	682	12.2
453.povray	548	9.70	575	9.26	550	9.67	383	13.9	383	13.9	385	13.8
454.calculix	613	13.5	613	13.5	613	13.5	611	13.5	611	13.5	611	13.5
459.GemsFDTD	1017	10.4	1016	10.4	1017	10.4	1017	10.4	1016	10.4	1017	10.4
465.tonto	770	12.8	771	12.8	770	12.8	716	13.7	716	13.7	716	13.7
470.lbm	781	17.6	781	17.6	781	17.6	779	17.6	779	17.6	779	17.6
481.wrf	766	14.6	766	14.6	766	14.6	766	14.6	766	14.6	766	14.6
482.sphinx3	1649	11.8	1653	11.8	1653	11.8	1628	12.0	1626	12.0	1630	12.0

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Compiler Invocation Notes

Sun Studio compiler patches are available at
http://developers.sun.com/sunstudio/downloads/patches/ss12_patches.jsp

Operating System Notes

Processes were assigned to a specific processor(processor_id 3) using 'psrset' command. (as below)

```
# psrset -c 3
# psrset -e 1 runspec -c ...
```

Shell Environments:
Default setting.

System Tunables:

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Operating System Notes (Continued)

(/etc/system parameters)

tune_t_fsflushr=10

Controls how many seconds elapse between runs of the page flush daemon, fsflush.

autoup=600

Causes pages older than the listed number of seconds to be written by fsflush.

bufhwm=3000

Memory byte limit for caching I/O buffers.

segmap_percent=1

Set maximum percent memory for file system cache.

Other System Settings:

The webconsole service was turned off using svcadm disable webconsole.

Platform Notes

Memory is 2-way interleaved by filling all slots with the same capacity DIMMs.

This result is measured on a Fujitsu SPARC Enterprise M3000 Server. Note that the Fujitsu SPARC Enterprise M3000 and Sun SPARC Enterprise M3000 are electrically equivalent.

Base Compiler Invocation

C benchmarks:

cc

C++ benchmarks:

CC

Fortran benchmarks:

f90

Benchmarks using both Fortran and C:

cc f90

Base Optimization Flags

C benchmarks:

-fast -fma=fused -xipo=2 -xpagesize=4M -xprefetch_level=2
-xalias_level=std -xprefetch_level=3
-xprefetch_auto_type=indirect_array_access

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Base Optimization Flags (Continued)

C++ benchmarks:

-library=stlport4 -fast -fma=fused -xipo=2 -xpagesize=4M
-xprefetch_level=2 -xalias_level=compatible

Fortran benchmarks:

-fast -fma=fused -xipo=2 -xpagesize=4M -xprefetch_level=2

Benchmarks using both Fortran and C:

-fast(cc) -fast(f90) -fma=fused -xipo=2 -xpagesize=4M
-xprefetch_level=2 -xalias_level=std -xprefetch_level=3
-xprefetch_auto_type=indirect_array_access

Peak Compiler Invocation

C benchmarks:

cc

C++ benchmarks:

CC

Fortran benchmarks:

f90

Benchmarks using both Fortran and C:

cc f90

Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: -fast -xipo=2 -fma=fused -xpagesize=4M -xprefetch_level=3
-xvector -xarch=generic

482.sphinx3: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -fma=fused
-xpagesize=4M

C++ benchmarks:

444.namd: -library=stlport4 -fast -xipo=2 -fma=fused -xpagesize=4M
-xdepend -xalias_level=compatible -xprefetch_level=1

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Peak Optimization Flags (Continued)

447.dealIII: -library=stlport4 -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -fma=fused
-xpagesize=4M -xdepend -xalias_level=compatible -xrestrict
-xprefetch_auto_type=indirect_array_access -xprefetch_level=2

450.soplex: -library=stlport4 -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -xdepend
-xprefetch_level=2 -xprefetch_auto_type=indirect_array_access
-Qoption cg -Qlp-ol=1 -Qoption cg -Qlp-it=3
-Qoption cg -Qlp-imb=1 -Qoption iropt -Apf:pdl=3

453.povray: -library=stlport4 -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -fma=fused
-xpagesize=4M -xdepend -xalias_level=compatible

Fortran benchmarks:

410.bwaves: -fast -xipo=2 -xprefetch_level=2
-xprefetch_auto_type=indirect_array_access

416.gamess: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -fma=fused
-xpagesize=4M

434.zeusmp: -fast -xipo=2 -fma=fused -xpagesize=4M -lmopt

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -fma=fused
-xpagesize=4M -lfast

Benchmarks using both Fortran and C:

435.gromacs: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast(cc) -fast(f90)
-xipo=2 -fma=fused -xpagesize=4M -xinline= -xchip=generic
-fsimple=0

436.cactusADM: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast(cc) -fast(f90)
-xipo=2 -fma=fused -xpagesize=4M

454.calculix: -fast(cc) -fast(f90) -xipo=2 -fma=fused -xpagesize=4M

481.wrf: basepeak = yes



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The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12-and-gccfss4.2.r3.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12-and-gccfss4.2.r3.xml>

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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